

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

December 16, 2013

Mr. Dana Bayuk
Oregon Department of Environmental Quality
Northwest Region, Portland Office
Portland Harbor Section
2020 SW Fourth Avenue, Suite 400
Portland Oregon 97201-4987

HAI Project No. 2708
DEQ ECSI File No. 84

SUBJECT: Progress Report, NW Natural Gasco Property, 7900 NW St. Helens Avenue, Portland, Oregon

Dear Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report summarizing Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural that have occurred relating to the Gasco property during the month of November 2013. NW Natural is completing upland investigatory activities at the subject property under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1.0 Communications and Document Submittals

Numerous e-mail communications and teleconferences with Anchor QEA and DEQ occurred in November to provide supplemental information as requested by DEQ for their review of the *Draft Human and Ecological Risk Assessment Report*.

In e-mail correspondence dated November 2, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural transmitted the *Final Groundwater Source Control Extraction System Test Plan* as well as a schedule for completion of the Phase 1 testing of the system.

In e-mail correspondence dated November 4, 2013 (Dana Bayuk to John Edwards), DEQ provided approval of the Phase 1 testing schedule as well as conditional approval of the *Final Groundwater Source Control Extraction System Test Plan* as provided to DEQ on November 2, 2013.

In correspondence dated November 5, 2013 (John Edwards to Dana Bayuk), Anchor QEA informed DEQ of DNAPL presence within the screened interval of well WS-14-161 at the Siltronic property. WS-14-161 is screened in a hybrid fashion across the aquitard, allowing contaminant migration to occur vertically through the aquitard. Abandonment and replacement of this well was recommended by NW Natural.

In correspondence dated November 5, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided a letter to DEQ summarizing the shakedown operations in progress for the Gasco source control hydraulic containment and treatment systems.

In e-mail correspondence dated November 8, 2013 (Dana Bayuk to John Edwards), DEQ cited several items missing from Appendix B of the *Final Groundwater Source Control Extraction System Test Plan*. DEQ requested that replacement pages be provided for inclusion into the Appendix, as appropriate. Anchor QEA responded on

November 8 (John Edwards to Dana Bayuk), that the DEQ-requested revisions to Appendix B were in process and would be provided to DEQ once ready (provided November 12).

Program Management Implementation meetings were conducted with DEQ on November 14 and 25, 2013 to discuss the NW Natural program management and project schedules.

The *Fill Water-Bearing Zone Trench Investigation Work Plan*, dated November 2013, was transmitted to DEQ in correspondence dated November 18, 2013 (Carl Stivers to Dana Bayuk).

In correspondence dated November 20, 2013 (Rob Ede to Dana Bayuk), HAI provided an updated groundwater monitoring schedule to DEQ that integrates NW Natural's Routine and HC&C Performance Monitoring programs into synchronous coordinated events.

In e-mail correspondence dated November 25, 2013 (Rob Ede to Dana Bayuk), HAI provided notice to DEQ of upcoming field activities related to the Fourth Quarter 2013 Routine Groundwater Monitoring Program. DEQ acknowledged receipt of this notification in correspondence dated November 26, 2013 (Dana Bayuk to Rob Ede).

In correspondence dated November 27, 2013 (Dana Bayuk to Bob Wyatt), DEQ provided comments from review of the following HAI-prepared documents:

- *RI Data Summary Report, Historical Manufactured Gas Plant Activities – Siltronic Corporation Property*, dated March 31, 2011.
- *Supplemental RI Field Sampling Plan – Doane Creek Embankment Soil and Sediment – Siltronic Corporation Property*, dated April 12, 2012.
- *Supplemental RI Field Sampling Plan – DNAPL Characterization – Siltronic Corporation Property*, dated April 12, 2012.
- *Supplemental RI Field Sampling Plan – Groundwater Monitoring Well Installation – Siltronic Corporation Property*, dated July 23, 2012.

2.0 Field Work

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during November. The system recovered 70 gallons of fluids, primarily DNAPL, during this time.

Baseline DNAPL removal as needed to maintain at levels below the tops of the well sumps, was conducted by Anchor QEA in the following wells near the river shoreline.

- PW-01-80
- PW-2L
- MW-16-45
- MW-18-30
- MW-38U
- WS-14-161

Discharge of treated water to the City of Portland sanitary sewer was initiated on March 16, 2007 under Temporary Wastewater Discharge Permit 500.022 (expires February 15, 2017). Results from NW Natural's effluent sampling are provided to BES in Discharge Monitoring Reports that are submitted for any month that effluent sampling occurs – which is at least quarterly in accordance with the permit. As of November 27, 2013 a total of 12,057,851 gallons of treated water have been discharged to the sanitary sewer in 2013, of which 5,950,740 gallons were treated groundwater from the source control extraction system, with the remainder being treated groundwater from the LNG containment basin.

Phase 1 testing (Pre-Test and Step 1 Test) of the groundwater source control extraction system occurred during November as per the schedule provided to DEQ on November 2 and approved in correspondence dated November 5. DNAPL monitoring and removal and applicable performance monitoring activities as described in the *Final Gasco Groundwater Source Control Extraction System Test Plan* were conducted during November.

3.0 Anticipated Activities in December 2013 and January 2014

Site-wide groundwater level and DNAPL measurements will be conducted by NW Natural at the Gasco and Siltronic properties in December, comprising the fourth quarter 2013 routine groundwater monitoring event (completed December 4, 2013).

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during December 2013 and January 2014 to discuss ongoing project tasks.

Discussions with DEQ as related to comments received on the Supplemental RI Field Sampling Plans for Siltronic property are anticipated to occur as needed during December and January.

A *Gasco Source Control Test Status Report* to include deliverables as described in the Test Plan, is expected to be provided to DEQ for review in late December 2013.

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- *Source Control Evaluation Report, "Segment 3" Siltronic Property Related to NW Natural "Gasco" Site*, February 19, 2009, Anchor QEA.
- *Final Stormwater Source Control Data Summary Report*, September 2010, Anchor QEA.
- *Request for Concurrence: Discharge of Groundwater Monitoring Purge Water, NW Natural – Gasco Property*, dated May 24, 2012, HAI, 2012.
- *Memorandum – Wastewater Treatment Plant Construction Excavation Activities*, dated August 16, 2013, HAI.
- *Revised Hydraulic Source Control and Containment System Groundwater Model Update Report*, dated October 9, 2013, Anchor QEA.
- *Gasco Upland Human Health and Ecological Risk Assessment Report*, dated October 24, 2013, Anchor QEA. (Preliminary comments received December 12, 2013)

- *Summary of Shakedown Operation of Gasco Source Control Hydraulic Containment and Treatment System*, dated November 5, 2013, Anchor QEA.
- *Fill Water-Bearing Zone Trench Investigation Work Plan*, dated November 18, 2013, Anchor QEA.

Should you have any questions, please contact the undersigned.

Sincerely,



Rob Ede, R.G.
Principal

robe@hahnenv.com

- c:
- Ms. Sandra Hart, NW Natural (electronic only)
 - Mr. Bob Wyatt, NW Natural (electronic only)
 - Ms. Patty Dost, Pearl Legal Group PC (electronic only)
 - Ms. Sarah Riddle, Pearl Legal Group PC (electronic only)
 - Mr. Carl Stivers, Anchor QEA, L.L.C. (electronic only)
 - Mr. John Edwards, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ben Hung, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ryan Barth, Anchor QEA, L.L.C. (electronic only)
 - Mr. Henning Larsen, DEQ NW Region (electronic only)
 - Mr. Tom Gainer, DEQ NW Region (electronic only)
 - Mr. Keith Johnson, DEQ NW Region (electronic only)
 - Mr. Myron Burr, Siltronic Corporation (electronic only)
 - Ms. Kristine Koch, Region 10 EPA (electronic only)
 - Mr. Sean Sheldrake, Region 10 EPA (electronic only)
 - Mr. Rene Fuentes, Region 10 EPA (electronic only)
 - Mr. Chip Humphrey, Region 10 EPA (electronic only)
 - Mr. Lance Peterson, CDM, Inc. (electronic only)